PRODUCT BULLETIN NO. 2164

CISCO ONS 15454 SOFTWARE RELEASE 4.0.0 FOR THE CISCO ONS 15454 SDH MULTISERVICE PROVISIONING PLATFORM

Cisco Systems® announces Cisco® ONS 15454 Software Release 4.0.0 for the industry-leading Cisco ONS 15454 SDH Multiservice Provisioning Platform (MSPP). Cisco ONS 15454 Software Release 4.0.0 focuses on enabling more efficient delivery of data services along with driving greater transport scalability and service interface densities.

CISCO ONS 15454 SOFTWARE RELEASE 4.0.0 HARDWARE FEATURES AND BENEFITS

Table 1 outlines the new hardware features supported by Cisco ONS 15454 Software Release 4.0.0.

Table 1. New Cisco ONS 15454 Software Release 4.0.0 Hardware Features

Feature	Benefit
XC-VXL low- and high-order cross-connect cards	Provides a comprehensive low- and high-order switching matrix for grooming, aggregation, and transport. Offered in two versions. The XC-VXL2.5G provides nonblocking STM-16 capacity to each of the 12 multiservice slots, providing a 192x192 VC-4 (and 4-Nc), 384x384 VC-3, and 2016x2016 VC-12 cross-connect matrix. The XC-VXL-10G provides nonblocking STM-64 capacity to each of the 4 high-speed slots and STM-16 capacity to the remaining 8 low-speed slots, providing a 384x384 VC-4 (and 4-Nc), 384x384 VC-3, and 2016x2016 VC-12 cross-connect matrix.
Advanced system processor card	The latest timing, communications, and control (TCC) card is an enhanced system processor designed to allow the Cisco ONS 15454 SDH platform to scale and continue to deliver advanced capabilities. This card supports up to 84 data communications channel (DCC) terminations—32 terminations supported in Cisco ONS 15454 SDH Software Release 4.0.0, per shelf assembly—providing the capability to terminate up to 42 rings on a single node. It also features an enhanced processor for improved software download, platform input voltage monitoring for improved monitoring, on-card lamp test support for simplified maintenance, and short-term time and date clock recovery for simplified operation.
High-density E1 card	Offers 42 E1 ports in a single-slot footprint, providing up to 336 unprotected and 252 protected E1 interfaces per Cisco ONS 15454 SDH system. This module is either unprotected or belongs to a 1:3 protection group. Related FMECs are released for front access to the connectors.
External E1 75 ohms/120 ohms converter	Allows converting the E1s termination of the high-density E1 card from 120 ohms to 75 ohms in an external 2 RU high panel.
ML-Series Ethernet cards	Offered in 12-port 10/100BASE-T and 2-port 1000 Mbps Ethernet cards, enabling Layer 2 and Layer 3 services to be delivered over an SDH infrastructure. Using advanced quality of service (QoS) capabilities, the ML-Series Ethernet cards enable better transport bandwidth utilization by allowing service providers to aggregate more customers per deployed network resources.
STM-64 intra-office optics card	Provides one intra-office 1310-nm optical port in a single-slot card. Allows a cost-effective interface to transponder-based metro and long-haul dense wavelength division multiplexing (DWDM) systems.
STM-64 short-haul optics card	Provides one short-haul 1550-nm optical port in a single-slot card. This card lowers networking costs for optical spans of less than 40 km.
STM-64 long-haul ITU optics card	Provides one long-haul 15xx.xx-nm optical port, supporting 1 of 32 ITU-100-GHz wavelengths, in a single-slot card. This card enables the user to scale their metro/regional networks to support 320 Gbps per fiber using DWDM optical filters, such as the Cisco ONS 15216 family of optical filters.
8-port STM-1 short-haul 1310-nm card	Provides eight short-haul optical ports in a single-slot card. Increases STM-1 port shelf density, reducing networking costs by lowering the number of systems required in high-density, lower-speed optical termination applications.
G-Series Gigabit Ethernet card	Direct replacement for the Cisco ONS 15454E-G1000-4 Gigabit Ethernet card. This new card is universal and works in any ONS 15454 SDH/SONET shelves with the different cross-connection cards.

All contents are Copyright © 1992–2005 Cisco Systems, Inc. All rights reserved. Important Notices and Privacy Statement.

CISCO ONS 15454 SDH SOFTWARE RELEASE 4.0.0 FEATURES AND BENEFITS

Table 2 outlines the marquis-software-based features supported by Cisco ONS 15454 SDH Software Release 4.0.0.

Table 2. Cisco ONS 15454 SDH Software Release 4.0.0 Features and Benefits

Feature	Benefit
Advanced QoS capability on ML-Series cards	Innovative features such as flexible packet classification, virtual LAN (VLAN) translation, 802.1Q in .1Q with Layer 2 and Layer 3 priority adjustment, traffic policing, and per-class queuing enable users to maximize networking resources while satisfying the required service-level agreements for the deployed applications.
Dual-ring interconnect (DRI) for SNCP (Sub-Network Connection Protection)	This feature enables further survivability for circuits traversing between two SNCP rings. Two rings can be interconnected via two Cisco ONS 15454 SDH network elements, and circuits traversing the two rings can be provisioned to be protected against node failures.
Linear-mapper mode for E-Series Ethernet cards	An E-Series Ethernet card provisioned in linear-mapper mode provides transparent transport of Ethernet frames for point-to-point circuits. This allows support for transparent LAN services with simplified provisioning requiring no VLAN or spanning-tree provisioning.
Expanded ring and linear network terminations per node	The Cisco ONS 15454 SDH platform equipped with the TCC2 card will support up to 16 SNCP rings with active SDCC (Section Data Communication Channel) management overhead on a single shelf.
Sub-line rate cross-connect loopbacks	The Cisco ONS 15454 SDH enables additional troubleshooting capabilities with VC-4 and VC-4-Xc cross-connection loopbacks.
Security enhancements	The Cisco ONS 15454 SDH security is further enhanced in R4.0.0.
IP address configurable display	This feature reduces the outbound visibility of a nodes IP address, except to super-users, to inhibit unauthorized user activity.
CTC Audit Trail enhancements	Some visual changes have been added to the Audit Trail to make it more readable.
CTC provisionable time-out control	CTC inactivity timeout can be provisioned for each security level.

More detailed information can be found in the Cisco ONS 15454 Software Release 4.0.0 release notes, available at: http://www.cisco.com/en/US/products/hw/optical/ps2006/prod_release_notes_list.html.

Cisco ONS 15454 Software Release 4.0.0 features are incremental additions to the Cisco ONS 15454 SDH platform. Previously supported Cisco ONS hardware and software features will continue to be supported unless specified in the Cisco ONS 15454 Software Release 4.0.0 release notes.

CISCO IOS SOFTWARE RELEASE INFORMATION

The Cisco ONS 15454 SDH ML-Series cards use the Cisco IOS® Software to deliver Layer 2 and Layer 3 functionality and are provisioned via the Cisco IOS Software command-line interface. Cisco IOS Software Release 12.1(14)EY is integrated into Cisco ONS 15454 SDH Software Release 4.0.0, enabling a single, unified software image for installation and operation. The Cisco IOS Software image is not upgradable independently from Cisco ONS 15454 SDH Software.

For details on the capabilities offered by the Cisco IOS Software release on the Cisco ONS 15454 SDH ML-Series cards, please review the Cisco ONS 15454 Software Release 4.0.0 user documentation, available at: http://www.cisco.com/en/US/products/hw/optical/ps2006/tsd_products_support_series_home.html.

All contents are Copyright © 1992–2005 Cisco Systems, Inc. All rights reserved. Important Notices and Privacy Statement.

COMPATIBILITY INFORMATION

Table 3 outlines the system requirements hardware and software related to Cisco ONS 15454 Software Release 4.0.0.

Table 3. Hardware and Software Compatibility Matrix

Product Code	Cisco ONS 15454 Software	Processor	Cross-Connect
Cisco ONS 15454 Software Release 4.0.0	Release 4.0.0	TCC2	XC-10G, XC-VXL2.5G, or XC-VXL-10G
STM-64 short-haul, intra-office, long-haul, and long-haul ITU cards	Release 4.0.0	TCC2	XC-10G, XC-VXL2.5G, or XC-VXL-10G
ML-Series cards	Release 4.0.0	TCC2	XC-10G, XC-VXL2.5G, or XC-VXL-10G
G1K-4 Gigabit Ethernet card	Release 4.0.0	TCC2	XC-10G, XC-VXL2.5G, or XC-VXL-10G
TCC2 card	Release 4.0.0	TCC2	XC-10G, XC-VXL2.5G, or XC-VXL-10G
8-port STM-1 short-haul card	Release 4.0.0	TCC2	XC-10G, XC-VXL2.5G, or XC-VXL-10G
42-port high density E1 card	Release 4.0.0	TCC2	XC-10G[1], XC-VXL2.5G, or XC-VXL-10G
Any pre-R4.0.0 service module (Electrical/Optical/Ethernet)	Release 4.0.0	TCC2	XC-10G[1], XC-VXL2.5G, or XC-VXL-10G

1. Low order grooming is not supported with XC-10G but only VC-4 tunneling of lower order circuits.

AVAILABILITY

Equipment orderability for Cisco ONS 15454 SDH Software Release 4.0.0 has been turned on March 21, 2003, with equipment shipment beginning March 31, 2003. Please contact your Cisco sales representative for more details.

ORDERING INFORMATION

Cisco ONS 15454 Software Release 4.0.0 can be ordered from your Cisco sales representative or through the Cisco.com ordering tool. Specific product codes and descriptions are detailed in Table 4.

Table 4. Product Part Numbers and Descriptions

Product Names	Product Description
15454E-TCC2	Advanced Timing, communications and control card, SDH system
15454E-XC-VXL2.5G	Low and High Order Cross-Connect card for 2.5G shelves
15454E-XC-VXL-10G	Low and High Order Cross-Connect card for 10G shelves
15454E-I64.1	STM-64 optics card, 1-port (Tx/Rx), Intra-Office, 1310 nm, single-mode SC connector, SDH system
15454E-S64.2	STM-64 optics card, 1-port (Tx/Rx), short-haul, 1550 nm, single-mode SC connector, SDH system
15454E-64L-xx.x[2]	STM-64 optics card, 1-port (Tx/Rx), extended long-haul, 15xx.xx-nm, SC connector, 100-GHz ITU compliant wavelengths
15454E-ML100T-12	10/100-Mbps Ethernet card, 12-port, RJ-45, Layer 2 and Layer 3 switching, SDH system, includes console cable
15454E-ML1000-2	1000-Mbps Ethernet card, 2-port, small form factor pluggable (SFP) slots, Layer 2 and Layer 3 switching, SDH system, includes console cable
15454E-G-1K-4	1000-Mbps Ethernet card, 4-Gigabit Interface Converter (GBIC) ports, Layer 1 transport, SDH system
15454E-S1.1-8	STM-1 optics card, 8-port, short-haul, 1310-nm, single-mode LC connectors, SDH system
15454E-SFP-LC-SX	SFP optics module, short-haul, 850-nm, multimode, LC connector
15454E-SFP-LC-LX	SFP optics module, long-haul, 1310-nm, single-mode, LC connector

All contents are Copyright © 1992–2005 Cisco Systems, Inc. All rights reserved. Important Notices and Privacy Statement.

Product Names	Product Description
15454E-E1-42	High-density, 42-port E1 card
15454E-E1-120NP	120-Ohm E1 FMEC card, no protection
15454E-E1-120PROA	120-Ohm E1 FMEC card, 1:3 protection for Side A
15454E-E1-120PROB	120-Ohm E1 FMEC card, 1:3 protection for Side B
15454E-E1-120-2	2-meter single-ended cable for HDE1 FMEC
15454E-E1-120-10	10-meter single-ended cable for HDE1 FMEC
15454E-E1-120-20	20-meter single-ended cable for HDE1 FMEC
15454E-E1-120-35	35-meter single-ended cable for HDE1 FMEC
15454E-E1-75BB	External 75/120-Ohm E1 converter
15454E-E1-75-C-2	E1 FMEC to Conversion Panel Cable (2m)
15454E-E1-75-C-10	E1 FMEC to Conversion Panel Cable (10m)
15454E-E1-75-C-20	E1 FMEC to Conversion Panel Cable (20m)
15454E-E1-75-C-35	E1 FMEC to Conversion Panel Cable (35m)
15454E-R4.0.0SWCD	Cisco ONS 15454 Software Release 4.0.0 for the Cisco ONS 15454 SDH system
SF15454E-R4.0.0	Cisco ONS 15454 Software Release 4.0.0 for the Cisco ONS 15454 SDH preloaded on the advanced TCC2 card
15454E-LIC-R4.0.0	Software license for upgrading an existing node to a R4.0.0 system software release
15454E-DOC4.0.0PP	User documentation (in paper format) for Cisco ONS 15454 Software Release 4.0.0, SDH system, English
15454E-DOC4.0.0CD	User documentation (in CD/ROM format) for Cisco ONS 15454 Software Release 4.0.0, SDH system, English

2. Available wavelengths can be found on the pricing tool located at: http://www.cisco.com/en/US/ordering/or13/or8/order_customer_help_how_to_order_listing.html.

Note: The systems and products described in this document are subject to New Product Hold, a status assigned to all new items that have not yet transacted through the Cisco manufacturing system and may not be available. Thus, product delivery dates can vary past the quoted first customer shipment (FCS) date.

http://www.cisco.com/en/US/ordering/or13/or8/order_customer_help_how_to_order_listing.html

Cisco ONS 15454 SDH products may be ordered through the Cisco Networking Products Marketplace online order entry tool. The product names and new Common Language Equipment Identifier (CLEI) codes for the Cisco ONS 15454 SDH products are available online at: http://tools.cisco.com/emco/pcnclei/prsc.

FOR MORE INFORMATION

For more information on the Cisco ONS 15454 SDH platform, visit: http://www.cisco.com/en/US/products/hw/optical/ps2006/ps2008/index.html.

To order Cisco equipment, visit: http://www.cisco.com/en/US/ordering.

All contents are Copyright © 1992–2005 Cisco Systems, Inc. All rights reserved. Important Notices and Privacy Statement.

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on the **Cisco Website at www.cisco.com/go/offices.**

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica
Croatia • Cyprus • Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR
Hungary • India • Indonesia • Ireland • Israel • Italy • Japan • Korea • Luxembourg • Malaysia • Mexico
The Netherlands • New Zealand • Norway • Peru • Philippines • Poland • Portugal • Puerto Rico • Romania • Russia
Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden • Switzerland • Taiwan
Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela • Vietnam • Zimbabwe

All contents are Copyright © 1992–2005 Cisco Systems, Inc. All rights reserved. Cisco, Cisco IOS, Cisco Systems, and the Cisco Systems logo are registered trademarks or trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0502R)

Pa/LW8469 05/05

Printed in USA

All contents are Copyright © 1992–2005 Cisco Systems, Inc. All rights reserved. Important Notices and Privacy Statement.